

U.S.S.N. 10/708,858

- 12 -

03-1088 (BOE 0481 PA)

**REMARKS**

Claims 30-35 stand objected to for the informality described in Paragraph 4 of the Office Action. Applicants have amended claim 30 to correctly depend from claim 25 as the Examiner proposes. Reconsideration of claims 30-35 is thus respectfully requested.

Claims 1, 15, 17, 25, 27 and 30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Specht et al. (U.S. Patent No. 5,985,362) in view of Klapper et al. (5,312,362) and further in view of Thom (U.S. Application No. 2001/0041753. Applicants respectfully traverse the Examiner's rejection.

Section 2143 of the Manual of Patent Examining Procedure states that three basic criteria must be met for establishing a *prima facie* case of obviousness, stating:

"First, there must some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach all of the claim limitations."

"If the examiner does not establish a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness." Section 2142 MPEP, ch. 2100, p. 110. "When the references cited by the Examiner fail to establish a *prima facie* case of obviousness, the rejection is improper and will be overturned."<sup>1</sup> One cannot use hindsight reconstruction, picking and choosing among isolated disclosures in the prior art, to deny that the claimed invention is unobvious.<sup>2</sup>

Specht et al. discloses an insulation system for fuselage walls having a formed-in-place, sprayed-on single layer of foam that is applied against a barrier material and can include a trim piece coupled to the foam layer. Klapper et al. discloses a thermoformable polyisocyanurate foam formed by reacting an organic polyisocyanate

---

<sup>1</sup> *In re Ochiai*, 71 F.3d 1565, 37 U.S.P.Q.2d 1127 (Fed. Cir. 1995), *citing In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

U.S.S.N. 10/708,858

- 13 -

03-1088 (BOE 0481 PA)

material and an isocyanate-reactive compound to form a foam. The Examiner has indicated that Klapper, et al. is added to indicate that open celled foams are well known for insulating aircrafts. Thom is added by the Examiner to disclose that it is known to use a melamine, open celled foam in automotive applications. The Examiner then states that the combination of these three references teach all of the elements of claims 1, 15, 17, 25, 27 and 30. However, as will be explained below, the combination of references does not teach the present invention as described in claims 1, 15, 17, 25, 27 and 30.

Claim 1 discloses a method for insulating the fuselage of an aircraft in which a melamine based hydrophobic open celled structure having a desired compressibility capability is formed and then sized to fit between adjacent pairs of a plurality of frames. The foam material is then compressed between the adjacent pairs of frames. In Sprecht et al., the foam material is not compression fit between the pairs, but is instead sprayed against a barrier material. This is substantially different from the present invention

As described in paragraph [0058] of the originally filed specification, the use of compression fitting the foam offers advantages over prior art systems, including a simplified manufacturing approach. The use of compression fitting also provides effective attachment to the fuselage and requires minimal attachment treatments. Further, compression fit of the open cell layer is used as an interface around brackets and unrelated hardware to provide superior close-out of gaps that would normally occur using traditional insulation to bracket interfaces. In addition, the use of compression fitted foams simplifies inspection of the fuselage due to the ease in removing or replacing the open-cell foam. Further, the introduction of open-cell foam provides superior acoustical insulation properties as compared with prior art foam structures and with prior art insulation systems not utilizing foams. In addition, the open-cell foam provides thermal insulation properties. In addition, the use of open-cell foam allows for the introduction of air gaps within the insulation, which provides additional acoustical

---

2 In re Fine, 837 F.2d at 1075.

U.S.S.N. 10/708,858

- 14 -

03-1088 (BOE 0481 PA)

properties and minimizes weight. Each of these advantages would not be realized using the spray-on technique of Sprecht, et al.

Thus, because none of the cited references teach all of the claim limitations of claim 1, as required by MPEP 2143, the Examiner has met the third of the three basic criteria for establishing a *prima facie* case of obviousness. As such, claim 1 is allowable over the cited combination of references. Further, claims 2-14, which depend from claim 1, are similarly allowable. Reconsideration of claims 1-14 is thus requested.

Independent claims 15 and 25 also require compression fitting the preformed foam between adjacent pairs of frames. As such, for reasons similar to those described above with respect to claim 1, these claims are similarly allowable. Further, claims 17-24 and 27-35, which depend from claims 15 and 25, respectively, are similarly allowable. depend from these allowable claims. Reconsideration of claims 15, 17-25 and 27-35 is thus respectfully requested.

Further, claims 21-25 and 27-35 also require a second insulation system closely coupled to a trim piece and further require a plurality of spacers that create an air gap. This additional features are not taught by Sprecht et al., Klapper et al., or Thom, alone or in combination. As such, for these additional reasons, claims 21-25 and 27-35 are allowable for alternative reasons over the cited combination of references. Reconsideration of claims 21-25 and 27-35 for these additional reasons is thus respectfully requested.

U.S.S.N. 10/708,858

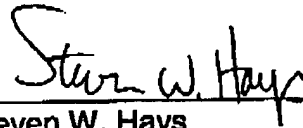
- 15 -

03-1088 (BOE 0481 PA)

In view of the foregoing amendments and remarks, Applicant submits that claims 1-15, 17-25, and 27-35 are in proper form and allowable over the cited prior art. The Examiner is invited to telephone the Applicants' undersigned attorney at (248) 223-9500 if any matters remain unresolved.

Respectfully Submitted,

ARTZ &amp; ARTZ P.C.



Steven W. Hays  
Reg. No. 41,823  
28333 Telegraph Road, Suite 250  
Southfield, MI 48034  
(248) 223-9500

Dated: June 6, 2005